

Attorney Docket No. 13DV-13124-2 (07783-0149-2)
Application No. 10/663,320

D) AMENDMENTS TO THE DRAWINGS

None.

E) REMARKS/ARGUMENTS

This Response is filed in response to an Office Action dated March 7, 2005. This Response is timely submitted with a one-month extension of time.

Upon entry of this response, claims 17-19, 21-23, 25-36, and 38-39 will be pending in the Application.

In the outstanding Office Action, the Examiner rejected claims 17-18, 26, 28, 30 and 32 under 35 U.S.C. 102(b) as being anticipated by Phillips et al. (US 5,424,119) (hereinafter "Phillips"), rejected claims 17, 26, 30 and 32 under 35 U.S.C. 102(b) as being anticipated by Masumoto et al. (U.S. Patent No. 4,891,068) (hereinafter "Masumoto") or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Masumoto, rejected claims 17-19 and 21-27 under 35 U.S.C. 103(a) as being obvious over Baldi (US 3,958,046) (hereinafter "Baldi"), rejected claims 18-19, 21-25, 28 and 34-35 under 35 U.S.C. 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which application regards as the invention, objected to the specification, and objected to the claims.

Rejection under 35 U.S.C. § 102(b)

The Examiner rejected claims 17-18, 26, 28, 30 and 32 under 35 U.S.C. 102(b) as being anticipated by Phillips.

Specifically, the Examiner stated that:

Phillips et al. discloses a method of disposing a plurality of non-spherical particles in a fluid medium, each particle including a major dimension, and casting the medium having particles onto the surface of an article, whereby the medium is maintained in the fluid condition for a time selected to enable the surface tension and gravitational forced to locate at least about 50% (or 60%) of the plurality of particles in a position generally along the article surface (col. 6, lines 11-36). The figures illustrate at least about 50%-60% of the plurality of particles are oriented parallel to the surface on which they are cast. As to claims 18

and 28, Figure 4. of Phillips et al. illustrates that multiple superimposed layers may be formed on top of and/or under the layer comprising the non-spherical particles.

Applicants respectfully traverse the rejection of claims 17-18, 26, 28, 30 and 32 under 35 U.S.C. § 102(b) by Phillips.

To begin, the examiner is reminded that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)." See Manual of Patent Examining Procedure, 8th Edition (MPEP), Section 2131.

Phillips, as understood, is directed toward a polymeric sheet comprising a layer of polymeric material having a first and second parallel surfaces. A plurality of oriented multilayer interference thin film flakes are disposed in the layer of polymeric material. The flakes have first and second parallel surface and a width and a thickness and have and aspect ratio of at least 2:1 for the width with respect to the thickness.

In contrast, amended independent claim 17 is directed to a method for orienting with respect to an article surface a plurality of non-spherical particles. The method comprises disposing non-spherical metal particles in a non-metallic and electrically non-conductive medium a viscosity of which can be increased, each particle including a major dimension, and each particle being capable of being moved by a force applied to each particle, the medium being in a fluid condition with the viscosity selected to provide a selected surface tension in the medium. The method further comprises disposing the medium with the particles on a surface of an article, the article surface having a complex, three-dimensional, non-planar shape. The method further comprises maintaining the medium in the fluid condition for a time selected to enable the surface tension to locate at least about 50% of the plurality of particles with the major dimension in a position generally along the article surface in respect to which

each particle is disposed, the particles being physically separated from one another such that the medium remains electrically non-conductive.

One of the features recited by Applicants in independent claim 17 is not taught or suggested by Phillips. Applicants submit that Phillips does not teach the use of an article surface having a complex, three-dimensional, non-planar shape. Phillips is specifically directed to the use of sheets, which are planar. As Phillips does not teach or suggest the limitations of independent claim 17, Applicants respectfully submit that Phillips does not anticipate Applicants' invention as recited in independent claim 17.

Applicants submit that the amendments to claim 17 are not new matter since support for the amendment may be found in paragraphs [0027], [0028], and [0045] of the specification and FIG. 10.

Dependent claim 18 is believed to be allowable as depending from what is believed to be allowable independent claim 17 for the reasons given above. In conclusion, it is respectfully submitted that claims 17-18 are not anticipated nor rendered obvious by Phillips and are therefore allowable.

In contrast, amended independent claim 26 is directed to a method for orienting with respect to an article surface a plurality of non-spherical particles. The method comprises disposing non-spherical metal particles in a non-metallic and electrically non-conductive matrix having a viscosity which can be increased, each particle including a major dimension, and each particle being capable of being moved by a force applied to each particle, the matrix being in a fluid condition with the viscosity and concentration selected to provide a selected surface tension in the matrix. The method further comprises disposing the matrix with the particles on a surface of an article, the article surface having a complex, three-dimensional, non planar shape. The method further comprises maintaining the matrix in the fluid condition for a time selected to enable surface tension to locate at least about 50% of the plurality of particles with the major dimension in a position generally along the article surface in respect to which

each particle is disposed, the particles being physically separated from one another such that the matrix remains electrically non-conductive.

Applicants submit that the amendments to claim 26 are not new matter since support for the amendment may be found in paragraphs [0027], [0028], and [0045] of the specification and FIG. 10.

One of the features recited by Applicants in independent claim 26 is not taught or suggested by Phillips. Applicants submit that Phillips does not teach the use of an article surface having a complex, three-dimensional, non-planar shape. Phillips is specifically directed to the use of polymeric sheets, which are planar. As Phillips does not teach or suggest the limitations of independent claim 26, Applicants respectfully submit that Phillips does not anticipate Applicants' invention as recited in independent claim 26.

In conclusion, it is respectfully submitted that that claim 26 is not anticipated nor rendered obvious by Phillips and is therefore allowable

In contrast, amended independent claim 32 is directed to a method for orienting with respect to an article surface a plurality of non-spherical particles. The method comprises disposing non-spherical metal particles in a non-metallic and electrically non-conductive medium having a viscosity which can be increased, each particle including a major dimension, and each particle being capable of being moved by a force applied to each particle, the medium being in a fluid condition with a viscosity and a concentration selected to provide a selected surface tension in the medium. The method further comprises disposing the medium with the particles on the article surface, the article surface having a complex three-dimensional, non-planar shape. The method further comprises maintaining the medium in the fluid condition for a time selected to enable a combination of gravity and surface tension to locate at least about 50% of the plurality of particles with the major dimension in a position generally along the article surface in respect to which each particle is disposed, the particles being physically separated from one another such that the medium remains non-conductive.

Applicants submit that the amendments to claim 32 are not new matter since support for the amendment may be found in paragraphs [0027], [0028], and [0045] and FIG. 10 of the specification.

One of the features recited by Applicants in independent claim 32 is not taught or suggested by Phillips. Applicants submit that Phillips does not teach the use of an article surface having a complex, three-dimensional, non-planar shape. Phillips is specifically directed to the use of polymeric sheets, which are planar. As Phillips does not teach or suggest the limitations of independent claim 32, Applicants respectfully submit that Phillips does not anticipate Applicants' invention as recited in independent claim 32.

In conclusion, it is respectfully submitted that that claim 32 is not anticipated nor rendered obvious by Phillips and is therefore allowable.

Rejection under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a)

The Examiner rejected claims 17, 26, 30 and 32 under 35 U.S.C. 102(b) as being anticipated by Masumoto et al. (U.S. Patent No. 4,891,068) (hereinafter "Masumoto") or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Masumoto.

Specifically, the Examiner stated that:

Masumoto et al. discloses a method of disposing a plurality of non-spherical particles in a fluid medium, each particle including a major dimension, and coating the medium having particles on the surface of an article, whereby the medium is maintained in the fluid condition for a time selected to enable the surface tension to locate at least about 50% (or 60%) of the plurality of particles in a position generally along the article surface (col. 1, lines 58-68 and col. 3, lines 46-55). Masumoto et al. teaches that surface tension provides the orientation of the powders, however gravitational forces would also necessarily act on the particles in the coating material. While Masumoto et al. does not disclose the percentage of particles positioned in a position parallel to the article surface, it is the Examiner's position that greater than 50% (or 60%) would

necessarily be positioned in such a direction because Masumoto et al. generally refers to *all* the particles laid in an overlapping, parallel manner to form a continuous film of powder. Alternatively, it is the Examiner's position that it would have been obvious to have maintained the medium in a fluid condition for a length of time to locate at least 50% (or 60%) of the particles in a position parallel to the surface since Masumoto et al. teaches that a continuous, overlapping parallel structure is desired to maximize the corrosion and weathering resistance properties of the particles/coating.

Applicants respectfully traverse the rejection of claims 17-18, 26, 28, 30 and 32 under 35 U.S.C. § 102(b) as anticipated by Masumoto, or, in the alternative under 103(a) as obvious over Masumoto.

The following principle of law applies to all Section 103 rejections. MPEP 2143.03 provides "To establish prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F2d 981, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)." [emphasis added] That is, to have any expectation of rejecting the claims over a single reference or a combination of references, each limitation must be taught somewhere in the applied prior art. If limitations are not found in any of the applied prior art, the rejection cannot stand. In this case, the applied prior art reference, applied individually, clearly do not arguably teach some limitations of the claims.

The Examiner is reminded that "[i]f the proposed modification or combination of the prior art would change the principle or operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." See MPEP, Section 2143.01.

Masumoto, as understood, is directed toward an additive powder for coating materials or plastics, comprising a particle of a metal or glass, comprised of a particle having a thickness of 0.5 to 5µm, a minor axis/major axis of from 5 to 500µm, an

aspect ratio (ratio of the major axis to the thickness) of not less than 5, and a ratio of the minor axis to the major axis, of from 1 to 10, and having the shape of a leaf as a whole. This powder can be prepared by melting a metal or glass, brining the resulting melt to flow out from a nozzle and jetting a gas to the melt to form droplets of the melt, and brining said droplets, before they solidify, to collide against the surface of a rotating cooling member having the shape of a cone or a horn and provided in the direction of the flow of said droplets, followed by cooling to effect solidification. This powder can readily cause the leafing phenomenon when added in coating materials and coated, and hence the coating surface can be effectively covered with the powder, so that it can impart superior corrosion resistance and weathering resistance as compared with conventional powder. It can also impart superior electromagnetic shielding properties when added in plastics or rubbers.

The method of amended claim 17 is set forth above and will not be repeated here.

A few of the claimed features recited by Applicants in independent claim 17 are not taught or suggested by Masumoto. Applicants submit that Masumoto does not teach the use of an article surface having a complex, three-dimensional, non-planar shape. Masumoto lacks any teaching on how the powder produced by the Masumoto process can be used to coat complex, three dimensional, non-planar shapes. Masumoto's teaching is directed toward the production of a leaf-shaped powder comprising flattened particles. Masumoto only speaks a very broad and vague manner that such particles may be "coated" (col. 3, lines 46-55). Without any additional teaching or suggestion of the application of the particles of Masumoto to substrates, Applicants submit that Masumoto cannot serve as a basis of rejection of independent claim 17 as being either anticipated by or obvious over Masumoto.

In addition, Masumoto neither teaches nor suggests the ultimate result of the particles being physically separated from one another such that the medium remains electrically non-conductive. In fact, Masumoto teaches away from such a result.

Masumoto specifically teaches that the powder particles may be used to cover the coating surface so that superior corrosion resistance may be obtained. As is well known in the art, in order to obtain corrosion protection from the powder particles, the powder particles must necessarily overlap one another on the coating surface, as even pinholes in an otherwise continuous coating may easily result in corrosion damage to the underlying coating surface. Clearly, Masumoto teaches that its powder particles are intended to be used to create a continuous coating layer. In contrast, Applicants' particles remain separated from one another to prevent the conduction of electricity, which is the opposite result that is achieved by following the teachings of Masumoto. As Masumoto clearly teaches away from Applicant's amended independent claim 17, Masumoto may not properly be used as either a 102 or 103 reference to reject claim 17.

As Masumoto does not teach or suggest the limitations of independent claim 17, Applicants respectfully submit that Masumoto neither anticipates nor renders obvious Applicants' invention as recited in independent claim 17. Dependent claim 18 is believed to be allowable as depending from what is believed to be allowable independent claim 17 for the reasons given above. In conclusion, it is respectfully submitted that claims 17-18 are neither anticipated nor rendered obvious by Masumoto and are therefore allowable.

The method of amended claim 26 is set forth above and will not be repeated here.

A few of the claimed features recited by Applicants in independent claim 26 are not taught or suggested by Masumoto. As set forth above, Applicants submit that Masumoto does not teach the use of an article surface having a complex, three-dimensional, non-planar shape and therefore cannot serve as a basis of rejection of independent claim 26 as being either anticipated by or obvious over Masumoto.

In addition, Masumoto neither teaches nor suggests the ultimate result of the particles being physically separated from one another such that the matrix remains

electrically non-conductive. In fact, Masumoto teaches away from such a result. Masumoto specifically teaches that the powder particles may be used to cover the coating surface so that superior corrosion resistance may be obtained. As is well known in the art, in order to obtain corrosion protection from the powder particles, the powder particles must necessarily overlap one another on the coating surface, as even pinholes in an otherwise continuous coating may easily result in corrosion damage to the underlying coating surface. Clearly, Masumoto teaches that its powder particles are intended to be used to create a continuous coating layer. In contrast, Applicants' particles remain separated from one another to prevent the conduction of electricity, which is the opposite result that is achieved by following the teachings of Masumoto. As Masumoto clearly teaches away from Applicant's amended independent claim 26, Masumoto may not properly be used as either a 102 or 103 reference to reject claim 26.

As Masumoto does not teach or suggest the limitations of independent claim 26, Applicants respectfully submit that Masumoto does not anticipate Applicants' invention as recited in independent claim 26. Dependent claims 28 and 30 is believed to be allowable as depending from what is believed to be allowable independent claim 26 for the reasons given above. In conclusion, it is respectfully submitted that claims 26, 28, and 30 are neither anticipated nor rendered obvious by Masumoto and are therefore allowable.

The method of amended claim 32 is set forth above and will not be repeated here.

A few of the claimed features recited by Applicants in independent claim 32 are not taught or suggested by Masumoto. As set forth above, Applicants submit that Masumoto does not teach the use of an article surface having a complex, three-dimensional, non-planar shape and therefore cannot serve as a basis of rejection of independent claim 32 as being either anticipated by or obvious over Masumoto.

In addition, Masumoto neither teaches nor suggests the ultimate result of the particles being physically separated from one another such that the medium remains electrically non-conductive. In fact, Masumoto teaches away from such a result. Masumoto specifically teaches that the powder particles may be used to cover the coating surface so that superior corrosion resistance may be obtained. As is well known in the art, in order to obtain corrosion protection from the powder particles, the powder particles must necessarily overlap one another on the coating surface, as even pinholes in an otherwise continuous coating may easily result in corrosion damage to the underlying coating surface. Clearly, Masumoto teaches that its powder particles are intended to be used to create a continuous coating layer. In contrast, Applicants' particles remain separated from one another to prevent the conduction of electricity, which is the opposite result that is achieved by following the teachings of Masumoto. As Masumoto clearly teaches away from Applicant's amended independent claim 32, Masumoto may not properly be used as either a 102 or 103 reference to reject claim 32.

As Masumoto does not teach or suggest the limitations of independent claim 32, Applicants respectfully submit that Masumoto does neither anticipate nor renders obvious Applicants' invention as recited in independent claim 32.

Rejection under 35 U.S.C. § 103

The Examiner rejected claims 17-19 and 21-27 under 35 U.S.C. § 103(a) as being unpatentable over Baldi in view of Masumoto.

Specifically, the Examiner stated that:

Baldi discloses a method of coating a jet turbine engine component with coatings in order to provide corrosion resistance to the component whereby one of the coatings comprises aluminum flake pigments (see Abstract and col. 5-6). Baldi teaches that the increased protection is greatly improved if the aluminum coating is effectively continuous over the surface being protected, a result that is obtained

when leafing-type aluminum particle are applied in amounts that permit the individual aluminum flakes to partially overlap each other over the entire surface being protected (col. 5, lines 8-15). One skilled in the art would have been motivated to look to the prior art for leaving-type aluminum particles that may be used in the process of Baldi that lay in an overlapping manner to form a continuous film. Such aluminum particles are taught by Masumoto et al., as discussed above in section 8. Masumoto et al. teaches that its leaf-shaped particles have a shape such that the leafing phenomenon occurs, whereby the surface tension of the coating material causes the particles to lay overlapping in parallel with the coating surface to form a continuous film, and thus provide improved corrosion and weathering resistance (col. 1, lines 60-68 and col. 3, lines 46-55). It would have been obvious for one having ordinary skill in the art to have incorporated the leaf-shaped aluminum particles taught by Masumoto et al. as the aluminum flakes in the process of Baldi with the expectation for successful results since Masumoto et al. teaches achieving the results desired by Baldi.

Masumoto et al. teaches that surface tension provides the orientation of the powders, however gravitation forces would also necessarily act on the particles in the coating material. While Masumoto et al. does not disclose the percentage of particles positioned in a position parallel to the article surface, it is the Examiner's position that greater than 50% (or 60%) would necessarily be positioned in such a direction because Masumoto et al. generally refers to all of the particles laid in an overlapping, parallel manner to form a continuous film of powder. Alternatively, it is the Examiner's position that it would have been obvious to have maintained the medium in a fluid condition for a length of time to locate at least 50% (or 60%) of the particles in a position parallel to the surface since Masumoto et al. teaches that a continuous, overlapping, parallel particle structure is desired to maximize the corrosion and weathering resistance properties of the particles/coating.

As to claims 23-24 and 36-37, it is noted that a turbine engine is a complex, three-dimensional, non-planar article having curved surfaces.

As to claims 18, 21, 28, 31, and 34, it would have been obvious to have applied plural superimposed layers of Baldi's coating comprising leafing-type aluminum particles, in place of a single thicker layer, with the expectation of similar and equivalent results. Further, multiple layers of leafing-type particles would ensure that a sufficient amount of particles are applied to form a continuous layer of the particles on the engine surface. As to claims 19 and 22, it would have been obvious to have determined the optimum thickness of the coatings through routine experimentation, depending on the numbers of layers

As claims 24 and 37 are cancelled, and new claims 38-39 are added, Applicants respectfully traverse the rejection of claims 17-19, 21-23, 25-36, and 38-39 under 35 U.S.C. § 103(a).

Baldi, as understood, is directed to aluminum diffusion coatings created using leafing aluminum coatings. The leafing aluminum coatings can be sprayed on from aqueous dispersion containing wetting agents and if desired a polyethylene glycol to help disperse the aluminum, as well as mixtures of phosphoric acid, chromic acid and magnesium, aluminum calcium or zinc salts of these acids. A protective second coating of such mixtures can be applied as a cover layer over the layer containing the leafing aluminum, and this combination works best on a ferrous metal that has an aluminum diffusion coating, particularly a ferrous metal that contains less than 1% chromium and has such an aluminum diffusion coating. It also works very well on aluminum diffusion coatings from packs containing chromium, or chromium and silicon, in addition to the aluminum, and these alloys can be made by magnesothermic reduction of their mixed oxides or the like.

The method of amended claim 17 is set forth above and will not be repeated here.

As set forth above, Applicants submit that Masumoto may not properly be used as a 103 reference to reject amended claim 17. In addition, a couple of the features recited by Applicants in independent claim 17 are neither taught nor suggested by Baldi.

As with Masumoto, Baldi neither teaches nor suggests the ultimate result of the particles being physically separated from one another such that the medium remains electrically non-conductive. As Examiner notes, "Baldi teaches that the increased protection is greatly improved if the aluminum coating is effectively continuous over the surface being protected." (col. 5, lines 8-15) Thus, Examiner admits that Baldi teaches away from the physical separation of the particles. Baldi's teaching simply reinforces

the fact that in order to obtain corrosion protection from the powder particles, the leafing-type aluminum flakes of Baldi must necessarily overlap one another on the coating surface to form a continuous barrier. Clearly, Baldi teaches that its leafing-type aluminum flakes are used to create a continuous coating layer. In contrast, Applicants' particles remain separated from one another to prevent the conduction of electricity, which is the opposite result that is achieved by following the teachings of Baldi. As Baldi clearly teaches away from Applicant's amended independent claim 17, Baldi may not properly be combined with Masumoto to create a 103 rejection of claim 17.

As Baldi, in view of Masumoto, does not teach or suggest the limitations of independent claim 17, Applicants respectfully submit that Baldi in view of Masumoto does not render obvious Applicants' invention as recited in independent claim 17. Dependent claims 18-19, 21-23, and 25 are believed to be allowable as depending from what is believed to be allowable independent claim 17 for the reasons given above. In conclusion, it is respectfully submitted that claims 18-19, 21-23 and 25 are not rendered obvious by Baldi in view of Masumoto and are therefore allowable.

The method of amended claim 26 is set forth above and will not be repeated here.

As set forth above, Applicants submit that Masumoto may not properly be used as a 103 reference to reject amended claim 26. In addition, a couple of the features recited by Applicants in independent claim 26 are neither taught nor suggested by Baldi.

As with Masumoto, Baldi neither teaches nor suggests the ultimate result of the particles being physically separated from one another such that the matrix remains electrically non-conductive. As Examiner notes, "Baldi teaches that the increased protection is greatly improved if the aluminum coating is effectively continuous over the surface being protected." (col. 5, lines 8-15) Thus, Examiner admits that Baldi teaches away from the physical separation of the particles. Baldi's teaching simply reinforces the fact that in order to obtain corrosion protection from the powder particles, the

leafing-type aluminum flakes of Baldi must necessarily overlap one another on the coating surface. Clearly, Baldi teaches that its leafing-type aluminum flakes are used to create a continuous coating layer. In contrast, Applicants' particles remain separated from one another to prevent the conduction of electricity, which is the opposite result that is achieved by following the teachings of Baldi. As Baldi clearly teaches away from Applicant's amended independent claim 17, Baldi may not properly be combined with Masumoto to create a 103 rejection of claim 17.

As Baldi, in view of Masumoto, does not teach or suggest the limitations of independent claim 26, Applicants respectfully submit that Baldi in view of Masumoto does not render obvious Applicants' invention as recited in independent claim 26. Dependent claims 27-31 and 38 are believed to be allowable as depending from what is believed to be allowable independent claim 26 for the reasons given above. In conclusion, it is respectfully submitted that claims 27-31 and 38 are not rendered obvious by Baldi in view of Masumoto and are therefore allowable.

The method of amended claim 32 is set forth above and will not be repeated here.

As set forth above, Applicants submit that Masumoto may not properly be used as a 103 reference to reject amended claim 32. In addition, a couple of the features recited by Applicants in independent claim 32 are neither taught nor suggested by Baldi.

As with Masumoto, Baldi neither teaches nor suggests the ultimate result of the particles being physically separated from one another such that the medium remains electrically non-conductive. As Examiner notes, "Baldi teaches that the increased protection is greatly improved if the aluminum coating is effectively continuous over the surface being protected." (col. 5, lines 8-15) Thus, Examiner admits that Baldi teaches away from the physical separation of the particles. Baldi's teaching simply reinforces the fact that in order to obtain corrosion protection from the powder particles, the leafing-type aluminum flakes of Baldi must necessarily overlap one another on the

coating surface. Clearly, Baldi teaches that its leafing-type aluminum flakes are used to create a continuous coating layer. In contrast, Applicants' particles remain separated from one another to prevent the conduction of electricity, which is the opposite result that is achieved by following the teachings of Baldi. As Baldi clearly teaches away from Applicant's amended independent claim 32, Baldi may not properly be combined with Masumoto to create a 103 rejection of claim 32.

As Baldi, in view of Masumoto, does not teach or suggest the limitations of independent claim 32, Applicants respectfully submit that Baldi in view of Masumoto does not render obvious Applicants' invention as recited in independent claim 32. Dependent claims 33-36 and 39 are believed to be allowable as depending from what is believed to be allowable independent claim 32 for the reasons given above. In conclusion, it is respectfully submitted that claims 33-36 and 39 are not rendered obvious by Baldi in view of Masumoto and are therefore allowable.

Rejection under 35 U.S.C. § 112

The Examiner rejected claim 18-19, 21-25, 28, and 34-35 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner stated that "[c]laims 18, 28, and 34 are vague and indefinite because it is not clear whether each of the plurality of superimposed layers requires the particles"

In response, Applicants have changed the language in claims 18, 28, and 34 so that each of claim 18, 28, 34 now contains the language, "each of the plurality of superimposed layers containing the particles". Applicants submit that claims 18, 28, and 34 are no longer vague and indefinite because it is clear the each of the plurality of superimposed layers requires the particles. As support for these amendments may be found in FIG. 10 and in the specification, Applicant submit that no new matter has been

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added as a result of these amendments to the claims. As claim 24 is cancelled and claim 39 is added, and as claims 19, 21-23, and 25 depend from claim 18 and claims 35 and 39 depends from claim 34, Applicants submit that the amendments from claims 18, 28 and 34 also address the Examiners rejection of claims 19, 21-23, and 25, and 39, As claims Applicants respectfully request reconsideration and withdraw of the rejections of claims 18-19, 21-23, 25, 28, 34-35, and 39 under 35 U.S.C. 112, second paragraph.

Objection to the Specification

The Examiner rejected the disclosure because "[t]he first paragraph of the specification should be amended to indicate the published patent number of the parent application.

In response, Applicants have amended the first paragraph of the patent application to indicate the published patent number and issue date of the now issued parent application. Applicants submit that no new matter has been added as a result of this amendment to the specification.

Objection to the Claims

The Examiner objected to claims 28-28 because of informalities, namely that "[t]he period is missing at the end of claim 28" and "[c]laim 29 is an exact duplicate of claim 27."

In response Applicants have amended claim 28 to include the period. As this was an obvious typographical error, Applicants submit that no new matter is added as a result of this amendment.

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In response, Applicants have amended claim 29 to so that claim 29 now depends from claim 28 instead of claim 26. As support for this amendment may be found in the specification, Applicants submit that no new matter is added as a result of this amendment.

Additional Amendments to the Specification

Applicants have added paragraphs [0012.1], [0012.2], and [0012.3] to restate claims 17, 26, and 32, respectively, within the specification. As support for these amendments may be found in amended independent claims 17, 26, and 32, Applicants submit that no new matter has been added as a result of these amendments to the specification.

Additional Claims

Applicants have added new claims 38-39. As support for these additional claims may be found in the specification and original claims, Applicants submit that no new matter has been added as a result of the addition of these new claims.

CONCLUSION

In view of the above, Applicants respectfully request reconsideration of the Application and withdrawal of the outstanding objections and rejections. As a result of the amendments and remarks presented herein, Applicants respectfully submit that claims 17-19, 21-23, 25-36, and 38-39 are neither anticipated nor rendered obvious, by Phillips, Masumoto, and/or Baldi, and thus are in condition for allowance. In addition Applicants respectfully request reconsideration and withdraw of the to claims 18-19, 21-

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23, 25, 28, 34-35, and 39 under 35 U.S.C. 112, second paragraph. As the claims are not anticipated by the applied art in view of the applied art, Applicants request allowance of claims 17-19, 21-23, 25-36, and 38-39 in a timely manner. Applicants also request that Examiner reconsider and withdraw the objection to the specification and claims. Applicants submit that no new matter has been added by the amendments to the claims and specification. If the Examiner believes that prosecution of this Application could be expedited by a telephone conference, the Examiner is encouraged to contact the Applicants.

The Commissioner is hereby authorized to charge any additional fees and credit any overpayments to Deposit Account No. 50-1059.

Respectfully submitted,
MCNEES WALLACE & NURICK LLC



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